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Authors and Articles

CARROL W. EHLERS

"The Use of Psychological Tests in Selecting Salesmen in the South"

Testing has become an important tool in the selection of employees in many fields. Because this tool increasingly is being used in the selection of salesmen, Dr. Ehlers, through a study of Atlanta-located firms whose operations embrace the Southeast, presents his findings as to the extent of use of psychological tests for selecting salesmen in the South, the type firms using them, their evaluation by those firms, and other pertinent information. The current article is digested from the full research paper on this subject.

Dr. Ehlers is Professor of Marketing in the School of Business Administration, Georgia State College of Business Administration.

GEORGE E. MANNERS

"The Management Forum: A Dean's Report to His Business Community"

Dr. Manners, Dean of the School of Business Administration of Georgia State College of Business Administration, presents a profile of today's graduate of a collegiate school of business: a graduate whose academic program more and more is being oriented to the ever-changing, complex climate of the present and future business world and is producing recruits with a more liberal education, wider concepts, broader skills, and more effective application of those skills. Dean Manners points out the need for businessmen to recognize these capabilities and to plan for their most profitable use in the business firm, which increasingly is assuming an influential role in our society.

JACK BLICKSILVER

"III. Industry History: Its Relation to Economic and Business History"

Dr. Blicksilver points out the difference in the points of view of the industry, economic, and business historian. He suggests that the economic historian traditionally has largely ignored the very significant part played by the businessman and the individual firm—recognized influential forces in economic trends; and that the business historian has often been concerned with the internal evolution of the firm, overlooking outside forces. A closer alliance between the approaches might result in the "industry history," in which would be acknowledged the influence of the business and the business firm as well as the broader social forces.

The author is Associate Professor of Economic History, School of Business Administration of Georgia State College of Business Administration.

ROBERT V. POTTER

"Are We Planting Too Many Trees?"

The extensive change in recent years in land-use, from farm products to tree farming, has been of great concern to many groups who question whether there is overplanting of trees. In this article the author points out that, though there may be certain areas of present overabundance of trees, as the nation continues in industrial strength, so will the demand for forest products continue; and he contends that, generally, tree planting should not be considered an unsound investment.

Mr. Potter is a Forester, Division of State & Private Forestry, Forest Service, U. S. Department of Agriculture, Atlanta.

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The Use Of Psychological Tests In Selecting Salesmen In The South

Carrol W. Ehlers

Psychological testing, one of the newer applications of scientific selection methods, is a major technique used by a number of companies to improve the quality of their salesman selection program; however, as is true with any relatively new technique, tests for selecting salesmen have become an area of controversy and confusion. As a company may profit from using tests, so it may lose potentially-productive manpower as a result of misuse or overevaluation of this technique.

The lack of adequate information about current application of psychological tests has prompted the current study of company practices. The two main objectives of this survey were:

1. To ascertain whether there are significant differences between companies using psychological tests for selecting salesmen and those that do not use tests.
2. To determine some of the differences in the application of tests by companies now using them.

Note: The full research paper, Number 18, "The Use of Psychological Tests in Selecting Salesmen in the South," by Dr. Ehlers, may be obtained from the Bureau of Business and Economic Research, School of Business Administration, Georgia State College of Business Administration (50¢ plus 2¢ sales tax in Georgia).

This article is condensed from the research paper—a study of 139 companies whose headquarters are in Atlanta and whose outside salesmen operate in one or more or all of the southern states of Georgia, Florida, Alabama, Mississippi, Tennessee, Kentucky, Louisiana, South Carolina, and North Carolina. Forty-six separate industries are presented in the sample, which includes manufacturers, wholesalers, retailers, independent agents, and service organizations, with sales forces ranging from less than five to more than 3,000 salesmen. The survey applies to the selection of full-time outside salesmen.

COMPARISON OF USERS AND NONUSERS OF TESTS

Of the total of 139 respondents in the questionnaire survey of Atlanta sales executives, 96 are presently using psychological tests for selecting salesmen, and 43 do not use them.

Characteristics Most Common to Users¹

The survey revealed certain characteristics to be more common to companies that use tests in selecting salesmen than to those not using tests:

1. A larger proportion are manufacturers.
2. The principal products are industrial goods, with prices ranging from \$50 to \$1,000.
3. The size of the sales force averages 100 or more. Home office operations generally employ twenty or more salesmen, while branch offices employ seven or more.
4. Salesmen most often call on industrial, professional, government, retail, wholesale, and institutional purchasers, and generally call on three or more different types of purchasers (industrial, professional, retail, etc.).
5. Users of tests have been in business forty or more years, and the total annual sales volume is one million dollars or more.
6. Users are likely to hire a lower percentage of those applicants they interview.
7. Users have a turnover rate of less than 20 per cent.
8. A total of 86 per cent are expanding the size of their sales forces.
9. The sources of recruiting salesmen were ranked by users in order of importance as: (a) own salesmen's recommendations; (b) promotion from within; and (c) schools.

Characteristics Most Common to Nonusers

Other characteristics were found to be more typical of those companies not using tests for selecting salesmen:

1. They are most often wholesalers and retailers.
2. They generally sell consumer goods, and the price of the chief product averages less than \$50.
3. A greater proportion employ less than 100 salesmen. Home office operations usually employ less than twenty men, and branch offices employ less than seven men.
4. Most salesmen of nonusers call on consumers or retailers.
5. Nonusers generally have been in business less than forty years and have a total annual sales volume of less than one million dollars.
6. They hire a larger percentage of applicants interviewed.
7. The salesman turnover rate is 35 per cent or more.

¹Sales forces that are currently using tests for selecting salesmen are referred to as "users." Those not currently using tests are designated as "nonusers."

8. Fifty-two per cent of nonusers reported that their sales force is expanding.

9. The ranked importance of recruiting sources by nonusers is: (a) application in person; (b) newspapers; and (c) employment agencies.

TESTING PRACTICES AMONG USERS

Testing Procedures

Responsibility for Testing. Adequate supervision of testing by trained personnel is held paramount by most psychologists. The sales manager is the individual chiefly charged with testing salesmen in most companies, though personnel with advanced training in testing and psychologists are used by many companies.

Supervision of Tests. Tests are given under supervision by 92 per cent of the respondents. In companies having trained personnel in charge of testing, there appears to be a greater adherence to scientific testing procedures, and supervision of testing becomes a foregone conclusion. When line personnel is in charge, there is a higher percentage of companies in which there is no supervision. This is probably due to lack of training and time available by a sales executive to spend on this phase of administration.

When Tests Are Given. About half of all sales managers stated that their company administers tests between the screening and line interviews rather than after both interviews. In over half the companies that use an *outside testing agency*, the tests are given after both the screening and line interviews. Only three per cent of all sales managers stated that they give tests before either of these interviews take place.

Where Tests Are Given. Most companies administer their tests in either the sales manager's office or the branch office of the company. A discordant note is injected by the fact that seven of the total tests users stated that tests are given to the applicant to fill out at home. Some feel that such practice is particularly undesirable, as several of the tests are personality and interest inventories.

Time Devoted to Tests. Time devoted to testing ranges from less than one hour to more than seven hours. Executives from 54 per cent of users allot from two to five hours for testing a typical applicant. The largest number of companies (20) reported two hours of testing time, and the second largest (18) reported three hours. A few companies reported more than seven hours. Time devoted to testing depends on the types of tests used, and it also varies with the price range of the company's product, the time increasing with the price of the product. When the price of the product is below \$50, there is a tendency for

companies to spend less time on testing.

Most firms selling industrial goods spend four or more hours testing sales applicants, while companies selling consumer goods tend to devote less than four hours in testing.

Turnover Rate in Relation to Testing Time. In all instances in which firms allocate much time testing sales applicants (four hours or more) the number of companies with low turnover rate (below 20 per cent) for sales forces exceeded the number of those with high turnover rate (above 20 per cent). (See Table 1.)

Types of Tests Given. Personality-type tests were mentioned more frequently than any other type, with eleven individual tests named. However, individual tests were usually used in combinations to form a regular test battery. When one test alone was named, it was most frequently the Wonderlic or the Otis Mental Ability Test.

TABLE 1
Turnover Rate for Sales Forces Compared with Testing Time
Users of Psychological Tests
Atlanta Firms (By Type of Activity)

	Testing Time	
	4 or more hrs.	Less than 4 hrs.
	(Number of Firms)	
Manufacturers		
Turnover* (below 20%)	11	15
Turnover (above 20%)	2	14
Service Organizations		
Turnover (below 20%)	4	4
Turnover (above 20%)	0	7
Agent or Broker		
Turnover (below 20%)	3	6
Turnover (above 20%)	0	5
Wholesaler-Retailer		
Turnover (below 20%)	3	13
Turnover (above 20%)	1	7

*Turnover rate derived by dividing the number of salesmen who terminate employment by the size of the total sales force.

Tests Norms Used. Over half of the sales executives that use tests use norms that are specially prepared for their company, and about one third use standard norms that are published with the tests. Larger companies generally were found to use specially prepared company norms. On the other hand, sales forces with less than sixty men were more inclined to use standard norms supplied with the tests. Of sales executives who believe turnover is reduced through use of tests, most use a combination of standard and company norms, or company norms alone. Executives who believe that tests do not reduce turnover were found mostly among those relying on standard published norms.

Need for Scientific Evaluation of Test Results. Unless a scientific method has been instituted to determine test results, there is little likelihood that one can

consider tests to be effective for selection purposes. Introduction of a testing procedure requires extra facilities which should be justified by improved selection—increased effectiveness and productivity of salesmen. Of test users, 61 per cent stated that studies have been conducted on the relation of test results to sales success. The largest proportion of this group did not explain how these studies were conducted. A sizable group gave answers which may be interpreted as a claim for good correlations between sales success and test results. A number stated they are now in the process of conducting studies to determine the effectiveness of their testing program.

Discussing Test Results with Applicant. Informing the applicant about his test results deserves greater attention than it has received in personnel testing circles. Every applicant may some day be a potential consumer of the company's products or in some way may influence the purchase of those products; there are also social and moral implications involved. Fifty-four of the test-using firms discuss test results with the applicant who is successful, but only twenty-four have this type discussion with the unsuccessful applicant.

Hiring Salesmen With Poor Test Results. Sales executives are fairly well divided with regard to the practice of hiring men despite unfavorable test reports. Of the respondents, 45 per cent said they do hire men although their test results are unsatisfactory. The most frequent reason cited by those who hire despite poor test results is that the interviewer's judgment, at times based on the applicant's experience, indicates the applicant has a high potential for sales success. The fact that sales executives are willing to exercise independent judgment in spite of test results is a significant sign that they are willing to depend upon their own or the interviewer's judgment when an applicant appears to have other qualifications important for sales success. However, simply exercising the interviewer's judgment in disregarding test scores does not always insure satisfactory selection. The skill of the interviewer and his perceptivity is an important variable in this situation. Just as test results should be validated against future sales success in the company, so should the interviewer's judgment about selection of applicants be tested to validate his effectiveness in selecting good men.

One may conclude that while a number of sales executives occasionally hire applicants whose test results are not up to company standards, they do so only because the applicant shows considerable promise or is exceptional in some particular respect.

Hiring Salesmen Without Testing. Twelve of the 96 users indicated that on occasion they hire men without testing them. The most common reason given for this was knowledge of applicant's past sales experience in the company's own field.

Uses Made of Tests

The value of psychological testing lies not only in its use as a selecting device, but also, if properly implemented, as an effective means of guiding future development of the individual. To the question of whether any further use is made of test results, 62 per cent of respondents replied in the affirmative.

Initial placement of the salesman was regarded as the most important use of test results. Next was the application of test scores for purposes of promotion, and ranking third was the use of test results for personal counseling. A number of respondents stated that test results help in training and supervising salesmen while they are in the early stages of the sales jobs.

Success of Testing

Criteria for Evaluating Success in Salesmanship. Criteria considered to be most important for evaluating the success of salesmen were ranked in this order: sales volume, sales volume against quota, number of daily calls, number of sales against number of calls, and personal impression of the man by the supervisor or the sales manager.

Success in Hiring Salesmen. More than half the respondents reported better than 70 per cent rate of success with men hired through testing. Twenty-five stated that their tests proved 100 per cent accurate. It should be recognized that sales executives hiring very few salesmen have a greater chance to be satisfied with their selection process than do those hiring a great many salesmen. Among companies reporting less than 50 per cent success, the largest proportion was from those whose line personnel is in charge of testing. Of companies reporting 50 per cent or greater success with tests, the largest number use psychologists for their testing program. This evidence lends further support to an increasingly apparent pattern developed in this survey; namely, that when line personnel are in charge of testing, results are not as effective as when personnel with more training are responsible.

Tests and Turnover Rates. Of the total of 96 test users, 67 stated they believe tests have reduced their turnover. Only 10 stated they do not believe this to be true. (Several indicated they do not have turnover in their sales force.) A surprisingly large number (20 per cent) were undecided. Comments generally expressed the thought that while tests have helped to reduce turnover, factors such as training, supervision, compensation, market conditions, and a host of other variables also influence the amount of turnover a company will have.

Objections to Tests for Salesmen

Objections to the use of psychological tests were varied. The most frequently mentioned objection was that test results tend to be overemphasized by the sales manager, with substitution of test scores for personal judgment of a candidate's qualifications. Many respondents feel that test scores are used as a crutch by executives rather than as an additional tool to be weighed with other procedures before arriving at an objective appraisal.

Nine respondents clearly mentioned that tests are not effective as much for identifying successful salesmen as for screening out potential failures. To believe that tests do more than indicate the possibilities or potentialities of an applicant for a given job is to give them more credit than they deserve.

Sales executives clearly recognize the limitations of psychological tests when they criticize the inability of such tests to show whether the candidate has the motivation for sales work. This seems to be a crucial issue with many executives. A number commented on the fact that motivation is of utmost importance in sales success, more so perhaps than other potentialities that can be easily measured.

Commendations of Psychological Tests

Many respondents answered the question as to what they like best about tests for salesmen. The outstanding comment was that tests are a good screening device and they help save time, money, and effort by indicating and eliminating a number of misfits or potentially dissatisfied employees. Another leading comment was that tests are an additional means of checking other selection devices. Respondents generally were of the opinion that tests perform a useful function if they can help to reduce the risk in selection.

Several executives stated they believe tests help them to understand the desirable and undesirable characteristics of the individual and to guide him better toward a successful sales career. The statement of a sales manager of a petroleum firm sums up the opinion expressed by a number of respondents. He said:

The tests provide an objective measure of a man's capacity, aptitudes, weaknesses, and interests, uninfluenced by personal opinion or prejudice. They provide a common measuring stick in selection. Testing has helped reduce the time and cost of training new employees. To an extent, it helps to insure employees' promotability. They are a useful supplement and check on information gained from interviews and reference checks.

In general, comments and opinions offered by respondents may be construed to mean that many

sales managers are conscious of the various uses that may be made of psychological tests. It is possible that they are hardly susceptible to extravagant claims made on behalf of tests by those commercial organizations selling testing services regardless of whether the tests are appropriate for the specific company in question.

INTERVIEWING IN ADDITION TO TESTING

Responsibility for Interviewing

Interviewing practices in a company vary with the personnel responsible for testing. Most companies use more than one interviewer for each applicant, more than one third of the firms reporting three interviewers. When the interviewing amounts to one hour or less, line personnel is most frequently responsible for testing. When more time is given to interviewing, staff personnel such as personnel managers or psychologists are more than likely in charge. Apparently when more time is given to interviewing, and trained personnel is responsible for selection procedures, more attention is given to evaluation of each sales candidate.

Time Devoted to Interviewing

Although time spent interviewing each applicant ranges from less than one hour to more than seven hours, 44 per cent of the test-using respondents spend from two to three hours. Ten per cent of all users stated they interview each applicant for seven hours or more (not necessarily in one day).

Relation to Per Cent Hired. When the proportion of applicants hired is below 20 per cent of the total interviewed, the larger proportion of companies report interview periods of four to five hours. Those that hire more than 20 per cent of their applicants are more likely to spend one hour or less in this procedure. Companies more cautious in their hiring policy invest a greater amount of time interviewing.

Relation to Turnover Rate. A comparison of turnover rates with time spent in interviewing (Table 2) shows that in all cases in which interviewing time is five or more hours, the number of companies with low turnover rate for sales forces (below 20 per cent) exceeds the number of those with high turnover rate (above 20 per cent). Of the total of 30 firms that spent five or more hours in interviewing each applicant, 26 had turnover rates of less than 20 per cent. For all types of activity, if less than five hours

are spent in interviewing time, there does not appear to be much effect on turnover rates.

It will be recalled that turnover was found to be higher when less time is devoted to testing. It may be concluded, therefore, that the more time given to both interviewing and testing, the lower the turnover rate. Though a number of factors influence turnover, there is an unmistakable relationship between lower turnover and increasing time devoted to testing and interviewing.

TABLE 2
Turnover Rate for Sales Forces
Compared with Interviewing Time
Users of Psychological Tests
Atlanta Firms (By Type of Activity)

Type of Firm and Turnover Rate	Interviewing Time	
	5 or more hrs.	Less than 5 hrs. (Number of Firms)
Manufacturers		
Turnover* (below 20%)	13	13
Turnover (above 20%)	2	14
Service Organizations		
Turnover (below 20%)	4	5
Turnover (above 20%)	0	6
Agent or Broker		
Turnover (below 20%)	5	5
Turnover (above 20%)	0	4
Wholesaler-Retailer		
Turnover (below 20%)	4	10
Turnover (above 20%)	2	8

*Turnover rate derived by dividing the number of salesmen who terminate employment by the size of the total sales force.

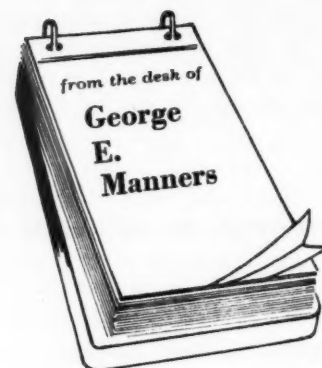
Interviewing vs. Testing

In answer to the question of relative importance of psychological tests and interviews, an overwhelming 85.4 per cent attached greater value to interviewing; 9.4 per cent placed prime importance in testing; while 5.2 per cent made no choice. Although some authorities would say that such a choice is not possible since each technique contributes something different to an objective appraisal, a company can obtain excellent results without the use of tests, but one could hardly conceive of a salesman's being hired without some sort of interview.

Relative Importance as Related to Testing Time. Of the nine companies (out of the 96 test users) that considered testing more worthwhile than interviewing, all but one devoted six or more hours to testing. Of the 82 companies believing interviewing to be more important, 32 devoted one hour or less to testing.

To assume that testing replaces interviewing, or vice versa, fails to consider that these tools complement one another. Each is designed to produce important information that cannot be secured easily by other known means.

THE MANAGEMENT FORUM



A Dean's Report to His Business Community

Businessmen in the Southeast must interest themselves in the thinking and the adjustments taking place in collegiate schools of business.¹ They should develop this interest in order to understand better the education which their college recruits of the coming years will receive. On such understanding depends the proper coordination of in-company development programs and the most effective utilization of new concepts and broader skills which increasingly are characterizing the educational process in, and the graduate of, collegiate schools of business.

There is much intellectual ferment among schools of business today. A sizable repository of new concepts and methods is being evaluated and assimilated into curricula. Unquestionably, many more changes in curricula and method will occur in the next few years.

Today's firm must be concerned with the method of most profitably absorbing a business graduate with an emphasis in management, a graduate who has been exposed to concepts and skills not currently possessed except by a handful of management graduates with advanced degree, and whose orientation includes:

- a. a healthy foundation in mathematics;
- b. an understanding of individual and group needs and behavior, arising out of a new unified approach to study in this area;

- c. the application of these new skills to the study of the modern firm through courses in organization theory and communications, economics of the firm, human relations, policy formulation, decision-making, operations research, and other conceptual approaches;

- d. development based on an individual and on a group decision-making approach;

- e. preparation directed towards methods of analysis, thought *and* action;

- f. exposure to decision-making under simulated competitive conditions based upon the mathematical theory of games; and

- g. a realistic and sound understanding of the meaning of planning, organizing, actuating, and controlling as functions of management.

If this coming graduate in management will be different from those of past years, so also will be his colleagues in the areas of accounting, finance, marketing, economics, insurance, actuarial science, and transportation. When the qualifications of the new graduate are added to a proportionately broader accomplishment of a truly liberal education, it will be apparent that the business community will soon be receiving a new human product which should be handled differently if the greatest benefit to the company and the individual is to be realized. Also, vast new needs may well develop for retraining older middle management and elements of top management and their staff.

Although these new ideas have been moving onto the academic scene for many years, general interest has been crystallized by the publication in 1959 of two

¹Degrees from Schools of Business aggregate approximately 17 per cent of degrees granted in the nation. Major curricular changes in this academic area have a decided potential impact upon the policies of business firms which employ these graduates.

books which are significant to every businessman.² While a sizable body of very valid criticism is being leveled at these books (criticism based in part on the fact that the writers are economists who may view the business process too impersonally, may downgrade even reasonable specialization unrealistically and too harshly, and may allow personal judgments to mar the purity of the studies), they have become focal points for discussion and debate.

In general, the constructive aspects of the works which appear to stand against criticism, and toward which business schools have moved and are moving, include:

1. Introduction of more mathematics, including finite mathematics, as a tool of analysis.
2. Centering the study of social sciences around a synthesis of anthropology-sociology-psychology and other areas, casting these disciplines into a unified approach (termed "behavioral science") to the study of human needs and behavior.
3. Devoting a greater proportion of the curriculum to *true* liberal arts subjects examined in a manner conducive to a liberal education.
4. Elimination of purely technique courses in all areas.
5. Changing the emphasis in undergraduate accounting to a comprehensive managerial approach and professionalizing the preparation of certified public accountants at a fifth year. Indeed, the emphasis in most fields will be a management approach and viewpoint.
6. Adding more analytical courses or emphasis in economics, with particular attention to macro (aggregative, or national income) economics and micro (loosely, of the individual) economics.
7. Reducing drastically the number of specialized courses and areas of major concentration. In turn, the majors will become more general and, because the student will be equipped with better analytical tools, more meaningful.
8. Relating methods of instruction more closely to the objectives of degree programs. Gaming, role playing, cases, and analysis will largely replace the lecture and rote methods of teaching.

These trends grow out of several converging factors. First, universities—like responsible businesses and nations—must plan ahead. In the case of universities, the concern with the future is related to the evaluation of historical needs against the flow of many new ideas. Universities today are concerned with the development of business leaders for the year 2000. It

²Frank C. Pierson et al, *Education of the American Businessman* (New York: McGraw-Hill, 1959); Gordon and Howell, *Higher Education for Business* (New York: Columbia University Press, 1959). The former study was sponsored by the Carnegie Foundation, the latter by the Ford Foundation.

is trite—but still of deadly necessity—to say that change at an ever-increasing rate is the order of the day in the declining decades of this century, and at this millennium. The scope and magnitude of these changes are broader than most individuals can assimilate, indeed, broader than many may care to contemplate. The universities realize that as a contribution for survival of this civilization they must be certain that students are properly inculcated with an understanding of the past story of man—its richness, its values, and its lessons, as well as with a knowledge of the present world; and that they are provided with the intellectual tools required to function effectively in the current world. Lastly and importantly, for this is precisely where the task of modern universities is of infinitely greater complexity than heretofore, the universities must be assured that to the students' background are added analytical tools and categories of intellectual understanding which will make an orderly assimilation and application of new knowledge possible in this evolving international drama, in which the stakes are national and cultural survival.

Accepting the challenge of new ideas in the midst of the buoyant environment of downtown Metropolitan Atlanta, the faculty of the School of Business Administration of Georgia State College determined to devote the entire academic year 1959-1960 to a careful study of its curriculum. This study related the present curriculum to the needs of the State and the region, to new ideas and methods, and to the future.

Meeting in committees and as a committee of the whole, week after week, the faculty took a hard look at itself, at practices elsewhere, at the curriculum, at the criticisms and suggestions leveled at business schools by the Gordon and Pierson reports. The time for inventory taking was also a time for gaining perspective. The curriculum, faculty, research output and publications, and the new concepts and methods that had been adopted were all compared with those of other leading schools of business and with the Pierson and the Gordon reports. It was felt that this School of Business Administration had made significant progress, and, in fact, was prepared to move to the fore in adjusting itself to prepare business leaders of the future.

The recommendations of the Gordon and Pierson reports were carefully weighed. Strategically, the faculty deliberated on the concept of "breadth" of the recommended undergraduate curriculum—a curriculum which decried specialization. However, the Gordon report acknowledged that regional institutions having strong faculties might well maintain proper specialization. For real success, sound specialization requires an exceptionally competent faculty and a

curriculum in which breadth within a particular industry is emphasized. Strategically, the administration and faculty viewed the institution as an urban-regional institution, dedicated to developing leaders for the growing financial, industrial, and governmental institutions of the region. Implicit in these considerations was the fact that the college, by its background, experience, and inclination, is suited to the continued development of a quality approach to graduate and undergraduate degree programs for adults as well as students of average college age.

Because of these factors, the faculty felt that the spirit of proper specialization should continue to guide the development of the undergraduate offerings and the goal to be sought would continue to be breadth *through* specialization, reaching the general through the particular.

Concurrently, the graduate program—at this time offered to adults in the evening only—would be composed of a common core of general courses which, in including an examination of the functions of the administrators and economic institutions, would emphasize breadth. This spirit of breadth and generalization also would continue to guide the offerings in the areas of emphasis at the level of the master's degree.

Schools of business administration throughout the nation are moving by the same path we are developing. Their programs are being planned for greater breadth and for providing analytical tools and methods with which students can apply and relate principles and concepts to particular problems.

It is healthy for business schools not to standardize. Our present-day business civilization and society require men and women with a myriad of varying and acute abilities, skills, and knowledge. Business needs for qualified personnel vary among industries, within each industry, and, indeed, vary among the states

and regions of this country. Flexibility is required also because of the prospective necessity for American businessmen to become involved in many and varied relations with the rising underdeveloped nations. These relationships are currently at a low conceptual level regarding business and its many-sided operations.

In this milieu it would be unwise and unwarranted to standardize completely the approach of schools of business to any field or subject matter. Rather, there is need for an incisive determination by each school of business of its own particular objectives and the designing of curricula and methods most appropriate to the accomplishment of these objectives.

Thus, in 1960 the School of Business Administration of Georgia State looks forward to the future—to an increasingly industrialized Southland; to a world in which survival calls for higher business and managerial skills. In the midst of buoyant Atlanta, the spirit of the faculty and students is equally buoyant. At times frustration arises as we view the chasm between what could be done and what is being done to adjust our educational system from a rural-agricultural-oriented one to an urban-industrial-scientific-oriented system. For in the latter lies the future of the children of the South and of the world. It would be well for leaders to postpone building monuments to the past and begin investing soundly in the future.

All businessmen should be proud of the achievements of all business schools and should lend these forward-looking developments their strong support. For, if this age is an age of struggle for national and cultural survival, it is also an age of the survival of the businessman as a leading influence in our society. What business schools are doing to promote this survival is worthy of both interest and support.

THE BUSINESS HISTORY

III. Industry History;

Its Relation to Economic and Business History

Jack Blicksilver

In both quantity and quality, work in the field of American economic history has attained a new peak since the end of the second World War, as testified to by a group of review articles requiring seventy-five pages in a recent issue of *The Journal of Economic History*.¹ During these years there has also occurred a proliferation in the writing of business history, an area of study which has had its roots in economic history but has tended to evolve into a distinct discipline. Business history has in the past served all too often either as a case study in the sins of the business system or as a commercial counterpart of Rebecca of Sunnybrook Farm; but in recent years a growing number of highly sophisticated and largely impartial studies in enterprise have been published.² In the process of growth and improvement, however, the two fields have moved further apart. On the one hand, economic history has increasingly reflected a mounting interest in growth economics, in the refinement and systematic use of quantitative data, and in the more explicit and rigorous application of theory to explain the changing structure and operation of the economy. The historian of business, on the other hand, immersed in company records, has tended to focus attention on the internal evolution of the firm with particular emphasis upon developments in management and the dynamics of policy formulation. "One closes most business histories," Dr. Herman E. Kross comments, "with the feeling that the firm was master of its fate, and that what happened outside the organization had little or nothing to do with the firm's success or failure."³

This growing dichotomy between economic and business history is to be deplored since each has much

to contribute to a better understanding of the other. The natural relationship between the two fields has been likened to that between micro- and macroeconomics.⁴ The economic historian traditionally has been concerned with the broad forces affecting economic change and with the economic and social results which follow. With his interest in trend analysis and his reliance upon statistical data, materials were to be drawn from a wide variety of printed sources, particularly government and trade publications. Explanations of changes taking place were to be sought in a careful analysis of the respective roles played by the physical environment, social institutions, and technological developments.

The critical weakness of this approach, contends the business historian, is that the part played by a principal generator of change—the businessman—is overlooked or unduly subordinated. In addition, a vital dimension is omitted in any realistic portrayal of a changing economy which does not include in the foreground the individual business firm. The omissions are to be attributed not only to the economic historian's lack of interest in policy formulation and control within the firm but perhaps even more so to the limited availability of business records and the particular skills and equipment which the scholar brings to his task. Since the historian is invariably the victim of his sources, the dehumanization of economic history can at least in some measure be laid at the feet of the families of entrepreneurs and managers who have destroyed manuscript material or declined to make it available to qualified researchers. But the economic historian has also been the victim of his own limitations. Thus, in those cases in which he has been granted access to business records, he has tended to satisfy himself with a perusal of correspon-

¹XIX (March, 1959), 1-75.

²John G. B. Hutchins, "Recent Contributions to Business History: The United States," *ibid.*, pp. 103-121.

³"Economic History and the New Business History," *ibid.*, XVIII (December, 1958), 479-480.

⁴A. K. Steigerwalt, "Business History in Academic Curricula: Central or Peripheral," *Atlanta Economic Review*, X (November, 1960), 12.

dence and the minutes of director and stockholder meetings, while generally eschewing any considerable use of ledgers, balance sheets, and income statements.⁵

These failings are, of course, avoided by the professional business historian. His stock in trade is the businessman and the firm; his major forte is administration; his orientation is toward the functional approach; and he usually is quite at home with double entry bookkeeping. Where he relies on other disciplines, there appears to be a growing movement to draw less from the quantitative studies which constitute a major interest of economic historians and to turn more toward sociology and intellectual history. In a provocative paper, Dr. Arthur H. Cole has recently asserted that while economic history is "non-intellectual in . . . that it largely limits itself to studying processes and counting results," business history is "essentially a part of intellectual history, concerned with the origin and flow of information [and] with the consequences thereof. . . . Business history is . . . close to sociological history—concerned with the interactions of men and institutions, and with cultural themes."⁶

But while the other social sciences certainly should supply information and provide suggestive questions for the business historian, they should properly supplement rather than supplant the position occupied by economic history. While economic historians are too often guilty of assuming that individual business units react in a like fashion to similar stimuli, it would be even more harmful to presuppose that external factors are insignificant in the evolution of the firm and to focus attention on the internal organization as though it were functioning in a vacuum.

Much more potentially productive of good than a final dissolution decree between economic and business history would be an attempt at a reconciliation, in which the legitimate offspring might well be industry history. The scope of such a project is sufficiently narrow to be manageable for the individual scholar or a small team of researchers to draw upon the business records of representative firms as well as printed materials. Thus, the emphasis could still be on the generalized, broad developments as largely shaped by external forces. But in examining the divergent reactions of a variety of firms subjected

to the same pressures, in evaluating intra-industry relations, and in gaining greater insight into the contribution of the individual businessman and unit to the changes taking place, our understanding of the firm, the industry, and the economy is broadened and enhanced.

Dr. Gras has stated that from the point of view of the business historian "it does not seem possible to write a history of the industry until the histories of the significant units within the industry have been written."⁷ If this precept were rigidly adhered to, not only would there be a complete absence of this type of study up to now but most likely the void would remain largely unfilled. For the near future, in any case, it seems probable that at least a few important units in most industries will maintain a policy of secrecy. But even if we ignore, for the sake of argument, the continued obduracy of some business leaders on this issue and disregard the pervasive problem of lost and misplaced records, it is rather doubtful that the model industry history will be written solely on the basis of material contained in company histories. Although the information and insights embodied in a competent study of a business unit would unquestionably be of great value to the student of the industry in which the firm was a part, a fresh view of the raw data, particularly incoming and outgoing correspondence, might well be warranted in light of the different questions to which it would be exposed and the different ways it could be used. As Dr. Cole has well stated: "The kinds of variables you use to explain whatever problem you are interested in are dependent upon the nature of the problem that you are concerned with."⁸

Therefore, the study which draws upon a wide variety of both printed and manuscript materials and which views the industry from the dual vantage points of the individual firm and the broader economy should achieve the greatest success in realistically depicting the industry as a living, pulsating organism, composed of a number of units each with its unique "style of play,"⁹ functioning in a world of external forces and pressures.

⁷Gras, *op. cit.*, p. 48.

⁵N.B.S. Gras, "Are You Writing a Business History?" (Boston: Business Historical Society, 1947), p. 10.

⁶"A History of Business in the United States," *Business History Review*, XXXII (Winter, 1958), 452.

⁸Statement made at the Conference on the History of American Business at the Harvard Business School on November 8, 1959. For a summary of the comments of participants and conclusions, see Arthur M. Johnson, "Conference on the History of American Business," *Business History Review*, XXXIII (Summer, 1959), 204-215.

⁹The phrase was used by Dr. John G. B. Hutchins in *ibid.*

An annotated bibliography of the major works in industry history is being prepared by Dr. Blicksilver and will be available for separate distribution in the near future. Address requests to the Bureau of Business and Economic Research, Georgia State College of Business Administration.

Are We Planting Too Many Trees?

Robert V. Potter

The southern landscape has changed markedly in the past decade. From the air one no longer sees an unending mass of cultivated fields. The corn stalk is being replaced by the pine tree. And in the midst of this change prophesiers claim that tree farmers will flood the market with southern pines. From other sources we hear that many more trees must be grown if future needs are to be met. Most people, however, aware that the issue is not a simple one, really don't know what to think.

The confusion brought about by the situation needs clarification. In this article an attempt is made to explain the issue by examining (1) reasons why trees are planted; (2) factors which influence market demand for forest products; (3) forecasts of future demand, and (4) sources of supply of forest products. Armed with this information, the reader will be better prepared to judge for himself whether too many trees are being planted.

Changing Land-Use

Growth of industry and impracticability of small-farming have led to a mass exodus of people from the farms to the city. Today the South has 600,000 fewer farms than there were 17 years ago. Field by field, farm by farm, as lands become unprofitable for growing cultivated crops, decisions are being made concerning the next best use. Near cities some abandoned farm-land is going into residential or industrial uses, but these allocations can absorb only a relatively small share of the total.

The most promising alternative uses for cropland seem to be pasture and tree farming. Farm owners have moved in both directions. But the decision to transfer cropland to permanent pasture or to trees cannot be made easily. Either choice requires an outlay of capital and effort for several years before cash returns are realized. In addition, once started, neither alternative may be reversed or altered without incurring a loss. It is this circumstance, apparently, which

leads some landowners to question the wisdom of planting any more former cropland to trees.

Tree-Planting at an All-Time High

Forest tree planting, nevertheless, has become very popular. In Georgia, more than 234 million tree seedlings, produced by State nurseries, were planted during the 1959-60 season. In the eleven southern states of Texas, Oklahoma, Louisiana, Mississippi, Arkansas, Alabama, Tennessee, Georgia, North Carolina, South Carolina, and Florida, the total area planted annually on all ownerships increased over fivefold from 282,716 acres in 1950 to 1,582,935 acres in 1959.¹ These states have definite advantages in growing trees. They have mild climate, long growing-seasons, and abundant rainfall. Furthermore, the economics involved in their changing land-use patterns makes it almost inevitable that much marginal cropland will either be planted to desirable trees, or will be abandoned to seed-in naturally in a haphazard fashion.

This boom in tree planting has not occurred without certain repercussions. Landowners who have planted and those who are considering planting trees as a financial investment are asking, "Are we getting pine poor?" They remember that this country already has a huge surplus of farm commodities, and they don't want to see their timber depreciate in value because it may become surplus.

Rural businessmen and officials of town and county governments also are concerned. Decline in rural population is closely associated with the expansion of forest land by tree planting. The decline in rural population means less purchasing power to support country stores and banks and less political support for town and county officials. Increase in size of land ownership, also associated with expansion of forest land, sometimes means lower returns to county governments from property taxes.

As this question about tree planting is examined, it becomes increasingly clear that it is asked for a variety of reasons and that a simple, unqualified, "yes" or "no" answer is inadequate. Tree planting is not a cause of declining agriculture; it is a result. Rural businessmen and public officials have little

¹Based on estimates of Forest Service, USDA, Atlanta, Georgia.

alternative but to adjust to the changes that are occurring. Landowners, on the other hand, are left with the inevitable decision of what to do with their property. They must decide whether tree farming will be their most profitable form of land-use and whether trees represent the best vegetative cover they can maintain on their land.

Reasons for Planting Trees

Why do people plant trees? Many of them are influenced in the first instance by the encouragement and assistance of government agencies and forest industries. So, before the objectives of individual landowners are considered, it is necessary to examine the motives of those who encourage the act.

State and federal agencies promote tree planting on private as well as public lands because of their responsibility for guarding the public interest. The versatility of forests as protective yet usable ground cover makes them ideally suited to meet the long-term, multiple-use interests of public agencies. Since the life span of society is much longer than that of individuals, it is necessary that public agencies place greater emphasis on values of the future. These agencies sometimes differ from individuals by wanting to provide for the more intangible values such as recreation, wildlife, and aesthetics, and to establish a slower rate of use of material assets. They are more content to incur resource expenditures which promise only distant returns, and they encourage private landowners to do so by furnishing them tree seedlings at cost and by providing the technical assistance necessary to insure successful planting.

Like the public groups, timber industries and pulp and paper industries encourage tree planting. Not only do they increase the stocking of their own lands by planting, but they also furnish seedlings and technical assistance to the owners of adjacent private lands. They are interested because the establishment of a large paper mill or lumber mill requires large investments of specialized capital which cannot be transferred readily to another location or to another use; and, also, a specialized work force must be recruited and trained. Such undertakings would be neither possible nor wise unless there were available to the mills a supply of wood which would be adequate for many years into the future. So it behooves forest industries to promote tree planting.

Owners of small, private tracts plant trees for a variety of reasons. Their objectives are not always simple, singular, or rational. Some folks plant their old homestead for sentimental reasons, some to manifest pride of ownership, and still others do so for personal aesthetic satisfaction. A growing number of people, however, have become investors in a forestry enterprise; they plant trees to acquire periodic income from the sale of wood and gum resin or from the commercial use of their forests for hunting and

outdoor recreation. Alert landowners on the fringes of growing cities have also discovered that speculative real estate values are likely to be greater for wooded lands. Sometimes a combination of these reasons lurks in the mind of a landowner when he decides to plant.

It seems inescapable that the reasons for planting trees depend, in the final analysis, upon almost everything else concerning the landowner. His aims are often complex and vague, they change with time, and are molded by the total environment in which he lives.

The Demand For Forest Products

Trees are valuable for more than their own physical content. They are part of a forest complex of interrelated, complementary products. The major products and uses of the forest—timber, water, recreation, and wildlife—often occur as joint products of the same tract of land. Of these, only timber and its chemical components are usually exchanged as regular cash crops in the market. More and more, however, price tags in the form of fees are being put on private woodlands for their use in hunting preserves and picnicking and camping areas. For example, twenty-two shooting preserves throughout Georgia are being opened to hunters this season.² It's obvious that demand for this kind of woodland use is likely to continue so long as people have enough time and money to spend on hunting pleasures.

The landowner who plants trees for a wood crop will need to consider additional factors. He will want to know at the outset whether he will be able to sell his products in large enough quantity and at a price sufficient to justify the investment. But such a guarantee can no more be made for tree farmers than for the producers of most other commodities because the factors which determine market demand are, themselves, numerous and variable. More than just per-capita income or the amount of leisure time must be considered.

Specifically, the demand for a commodity depends upon: (1) the price at which the commodity is offered for sale; (2) the purchasing power of individual consumers as represented by their disposable income and their access to credit; (3) the tastes and preferences of the individual consumers; (4) the total number of consumers; (5) the prices at which substitute and complementary commodities are offered for sale; and (6) the extent to which technology is able to improve the utility of the product.³ Each of these factors is dynamic and extremely difficult to measure precisely

²"Shooting Preserves Set To Open October 1," *Atlanta Constitution*, Sept. 20, 1960.

³Albert C. Worrell, *Economics of American Forestry* (New York: John Wiley & Son, Inc., 1959), pp. 77, 78.

for a country, region, or state. Not even the best informed landowner, therefore, can anticipate future markets with any degree of certainty. Like the investor in stocks, cattle, or chickens, the tree farmer makes an estimate of future conditions and launches out on a calculated risk.

A better understanding of the demand picture for wood and wood extracts may be acquired by examining the many different uses to which they are put. Each year in the United States the total wood used divides about evenly into products which are needed for the production of other goods and services and products which end up as consumers' goods.⁴ Lumber is the classical consumers' good. Woodfiber and chemical extracts from pulpwood and resin are typical producers' (processing components) goods. They are used in the production of paper, nylon, yeast, alcohol, adhesives, plastics, and vanillin. They lose their identity as forest products long before the consumer stage is reached.

Demand for a product such as lumber behaves differently than does the demand for wood used as a producers' good. This is due to a difference in the "price elasticity of demand," a factor which depends largely on the extent to which the commodity is made more attractive to consumers through manufacturing.⁵ Demand depends also on whether the commodity is considered a luxury or a necessity, whether there are any close substitutes, and on the price level. The demand for products such as facial tissues, paper towels, rayon underwear, and nylon stockings is likely to remain fairly stable so long as changes in their retail prices remain within a certain low range or until more desirable substitutes are developed. The demand for lumber, on the other hand, is becoming more and more elastic. Its manufacturing costs and retail prices have increased to a high level with relatively little change in quality of the end product, while at the same time substitutes such as aluminum siding, concrete slabs, and plywood and veneer are competing at an increasing rate.

The elasticity of demand for wooden materials also is affected by the extent the materials are used in a complementary fashion with other goods and services. For example, charcoal will be in demand as long as people use their charcoal grills. The woodworking hobbyist likewise will continue to buy plywood and lumber for milling on the lathes and saws he already owns.

⁴*Ibid.*, p. 181.

⁵"Price elasticity" refers to the extent to which the consumption of a product will vary with the price asked for it. "Inelastic demand," for example, means that people will buy the same quantity regardless of a change in price. "Elastic demand," on the other hand, means that a small increase in price may bring about a substantial change in the quantity purchased. It is not to be confused with "income elasticity of demand," which is the relative change in demand brought about by a change in the level of income.

As more of the total wood consumption shifts from uses which are high priced and of limited utility to products which are diverse, of good quality, and relatively inexpensive, it appears likely that the total demand for timber itself will become less elastic, hence more stable. If this stability occurs at a price level which is high enough to allow the manufacturer or processor a fair margin for profit, then the tree farmer will be in a better marketing position than he now enjoys.

The implication, of course, is that tree farmers probably will enjoy favorable markets for their products so long as our growing economy enables a high standard of living and large investment in technology. Because of the extent to which wood is a producers' good, forestry is particularly vulnerable to any major decline in consumer demand, not merely for wood products but for goods in general. But consumer demand depends on consumer income which can be obtained only by furnishing the productive services used in producing other goods and services. The demand for wood as a producers' good depends, to a large part, therefore, on the level of economic activity in the whole economy. "There can be no such thing as a prosperous forestry without the rest of economy being prosperous too."⁶

TABLE 1
Estimated Percentage Change in Log and Bolt Requirements
for Domestic Wood Product Consumption in the United States;
Based on Three Studies

Wood Product	Dept. of Commerce ^a	Stanford ^b	Dept. of Agriculture ^c
	(1956-65)	(1952-75)	(1952-75)
	%	%	%
Pulpwood	+48	+60	+96
Sawlogs for lumber	—	+16	+31
Plywood & veneer logs	—	+90	+80
Other industrial wood (poles, piling, posts, ties, cooperage, charcoal, etc.)	—	- 1	+14
Total all wood products	—	+14	+30

Source: derived from volume data in:

^a Albert C. Worrell, *Economics of American Forestry* (New York: John Wiley & Son, Inc., 1959), p. 386, Table 20-4, and U. S. Dept. of Commerce, "Pulp, Paper, and Board Supply Demand," pp. 20, 21, 28, House Report No. 173, 1957.

^b Worrell, p. 382, Table 20-2, and Summary of Stanford Research Institute, "America's Demand for Wood," Table 37, 1954.

^c Worrell, p. 389, Table 20-6, and "Timber Resources for America's Future," p. 465, Forest Resource Report No. 14, U. S. Department of Agriculture, Forest Service, 1958. Based on the Medium Projections which are the basic estimates.

Projections of Future Demand

Since 1952 three major forecasts of future market conditions for forest products have been made. Three different agencies—U. S. Department of Agriculture, U. S. Department of Commerce, and Stanford University, California—concluded in the light of reasonable predictions of future economic conditions that

⁶Worrell, *op. cit.*, p. 181.

the consumption of wood products will increase materially. All of these estimates anticipate a continuous increase in demand for wood products. They differ, however, in estimates of future changes in consumer tastes and preferences. Other differences in their estimates of consumption are due mainly to estimated differences in future price levels of wood products. A summary of these three forecasts of the future is given in Table 1.

At this point it appears safe to conclude that the demand for wood products will increase in the future. Precisely what will happen to consumption of wood in the future is less certain because of its dependence on supply; and supply will depend on the production decisions and actions which are taken today. Therefore, today's production decisions and actions will affect future consumption.

Local Exceptions Will Occur

In spite of the general optimism for future demand of wood products, there will always be local and temporary exceptions. Because in our free enterprise system interaction between supply and demand is a dynamic relationship, complete balance between the two is not likely to occur either in point of time or at any one location. In Central and Southwest Louisiana, for example, there is now enough surplus pulpwood growing to support six more pulp mills the size of the Calcasieu Mill at Elizabeth, Louisiana.⁷ The Calcasieu operation provides employment for 1,200 people. In some areas, industrial development has not continued at a pace fast enough to utilize fully the raw materials available. In other places such as Florida and Georgia, supply has not yet matched demand and there is keen competition among mills for wood.

Sources of Future Supply

Most southern pine is exchanged in southern and eastern markets. But even there it meets with competition from wood grown in the western part of the United States and in other countries. Therefore, southern timber producers have reason to be interested in present and prospective wood supplied from places beyond their own region.

About 90 per cent of the wood products now used in this country is produced here. The remainder is imported chiefly from Canada in the form of softwood products such as pulpwood, wood pulp, and paper. Imported also are some high-quality hardwoods from Central and South America. Canada might increase her exports, but hardly enough to satisfy our expected increased demands. Other Free World countries have little softwood timber to spare. It is apparent that we

shall continue to depend on our own forests for the bulk of our softwood supply.⁸

Timber from Alaska will probably not enter into eastern lumber markets. A considerable increase in the price of domestic lumber relative to the prices of competing materials would be necessary to make shipments of common grades of lumber from Alaska economically feasible, due to high freight costs. Furthermore, predominant Alaskan species are especially adaptable to pulping, and Alaskan timber is more likely to be used for producing pulp than lumber.

Domestic lumber production is concentrated in the West. Production in 1959 was expected to represent over half of all lumber and two thirds of the softwood lumber produced in the United States.⁹ About two thirds of the nation's sawtimber supply and about 80 per cent of the country's softwood growing stock volume is located in the West. Most of this volume is in old-growth sawtimber trees of relatively high quality. In addition, increased utilization of sawmill and plywood mill residues can provide relatively low-cost wood for a major expansion of sulphate pulp and whole-wood fiber production during future decades. Over a longer period, large volumes of wood left as logging slash in old-growth operations may also contribute greatly to the pulpwood supply.¹⁰ It appears that West Coast timber will continue to compete with the southern pine in eastern markets.

The South contains about 23 per cent of the nation's growing stock, 18 per cent of the sawtimber volume, and 40 per cent of the nation's commercial forestland. Growth rates are high, logging conditions are relatively easy, year-round woods employment is possible, and the labor supply is relatively good. Market location is also highly favorable, with relatively short distances to the great industrial centers in the North and Midwest.¹¹

In 1959 the South expected to produce about 12.1 billion board feet of lumber to account for 33 per cent of national production. There has been no marked trend in total production since 1940, although production of softwood lumber has generally declined while hardwood lumber production increased.¹² About 61 per cent of the nation's pulpwood supply in 1959 came from southern forests. Here, pulpwood production has increased rapidly from 8.1 million cords in 1945 to about 22.0 million cords in 1959. About 10

⁸Look to Your Timber, America, Misc. Publ. No. 766, Forest Service, USDA, Feb. 1960, p. 3.

⁹The Demand and Price Situation for Forest Products, Forest Service and Commodity Stabilization Service, USDA, Nov. 1959, pp. 5, 6.

¹⁰America's Demand For Wood, Stanford Research Institute, Stanford University, California, 1954, p. 25.

¹¹Demand and Price Situation of Forest Products, op. cit., p. 6.

¹²Ibid.

⁷W. S. Stover, "Bring Us Mills to Match Our TREES," *Forests and People*, Second Quarter, 1960, published by Louisiana Forestry Association, Alexandria, Louisiana, p. 12.

per cent of the production in 1958 was in the form of chipped residues from sawmills and veneer plants.¹³

Reports from forest surveys and other studies recently completed or under way in southern states reveal that, as a result of increased emphasis on forestry, timber growth-cut relationships are improving generally across the South. A state-by-state summary of these latest reports follows:

Louisiana—Current pine growth in a 13-parish area of Central and Southwest Louisiana is about twice the pine cut. A surplus exists in this area.¹⁴

Arkansas—The Forest Survey completed in 1959 reveals a 30 per cent increase in softwood growing stock (which includes sound, well-formed trees at least 5.0 inches in diameter) since the 1949 survey.¹⁵

Mississippi—Since 1948 the area of well-stocked forest land has increased from less than one third to 56 per cent of the total forest area. Softwood growing stock is up 8 per cent. The net growth of softwood sawtimber (12 inches and larger in diameter) exceeded the cut by 57 per cent in 1956.¹⁶

North Carolina—At present, North Carolina's timber is growing faster than it is being cut. Growth of softwood pole timber (trees 5 to 9 inches in diameter) exceeds cut by 68 per cent. Softwood sawtimber (9 inches and larger) growth exceeds cut by 11 per cent.¹⁷

South Carolina—A current trend level of softwood lumber production is up 11 per cent. Pine pulpwood production has increased fourfold during the period 1937-1958. Total growth is increasing. Total volume of timber is also increasing, but average size is decreasing. Prospective growth, based on the continuation of the past average annual change in timber volume by diameter class, would sustain a substantial increase in total cut, but it would not sustain a current size class distribution of even the present cut.¹⁸

Florida—Preliminary information on the 1958-59 Forest Survey shows Florida is "not quite holding its own in pine volume in the 10 years since the 1948 Forest Survey."¹⁹

Southern pines planted since 1952 will not be large enough to have any great effect on the market supply of plywood and veneer timber or sawlogs for lumber before 1975. Pulpwood supply during this period, however, will vary from area to area. In the southeastern states of Alabama, Florida, Georgia, and South Carolina it is likely to be less than adequate for pulp and paper mill requirements. In Mississippi, Louisiana, and Texas there is already enough

supply on hand to warrant additional industrial expansion.

Reasons for Optimism

Present growth-cut relationships of softwoods in some localities may be sufficient reason for landowners to be cautious when considering the planting of additional lands. In some places industrial development has not yet occurred fast enough to utilize fully the added growth of softwoods. Nevertheless, there are some very significant reasons why tree planting should not be dismissed as an unsound investment.

Trees are a highly durable form of capital. Unlike most other agricultural products, timber is not generally a perishable commodity; it does not have to be cut quickly before it spoils. Also, there is a considerable period of time between the age at which a tree attains merchantable size and the age at which it begins to deteriorate from over-maturity. So trees ordinarily can be "stored on the stump" and at the same time increase in volume and value. Unlike the marketing of products such as poultry and cattle, timber normally can be held for sale until prices are favorable. The inherent risk-reducing features of the tree provide built-in flexibility for its management and handling.

Rapid industrial expansion in the South is keeping the economy at a high level. Annual expenditures for new plants and equipment in Georgia and elsewhere in the South have nearly doubled since World War II. They have increased in total annual rate in the region from 1.4 billion dollars in 1947 to 2.3 billion in 1958.²⁰ A large share of these expenditures has resulted in the location, expansion, and diversification in the South of most of the nation's largest forest products corporations.

The demand for forest products will continue to increase so long as the industrial strength of this nation continues to grow. Industrial growth in a competitive society means more wages for the average worker. It also means more products of greater variety and higher quality for the consumer. As people's new and growing wants for these products keep pace with their rising disposable income, they are relayed back through the layers of industry to the producers forming each of the layers—the retailers, wholesalers, converters, and timber owners. These producers respond by enlarging their capacity and output, for they too are seeking to satisfy their own insatiable wants. And so long as there are renewable, versatile resources to keep the industries going, the demand for goods can be made to grow as rapidly as the capacity to produce them.

¹³*Ibid.*, p. 9.

¹⁴W. S. Stover, *loc. cit.*

¹⁵H. S. Sternitzke, "Southern Forestry Notes," No. 121, Southern Forest Experiment Station, Forest Service, USDA, May 1959.

¹⁶*Mississippi Forests*, Southern Forest Experiment Station, Forest Service, USDA, 1958, pp. 3-9.

¹⁷*Timber in North Carolina*, Forest Resource Report No. 15, Forest Service, USDA, Washington, D. C., Jan., 1959, p. 7.

¹⁸Final draft, Forest Survey Release No. 55, entitled "South Carolina's Timber Supply," Southeastern Forest Exp. Sta., Forest Service, USDA, 1960.

¹⁹"Florida Forest Service News," Vol. 10, No. 5, Tallahassee, Florida, May 1960.

²⁰"New Factories Double In The South," *Atlanta Journal*, June 1, 1960.

Research, Action, and Democracy

(Excerpts from the Foreword "Rightly to be Great," by August Heckscher, Director, Twentieth Century Fund, Annual Report, 1959)

"It is a matter of record that we let the natural resources of the United States be exploited almost beyond repair before we began to take measures to restore the balance; even now we are letting our railroad system disintegrate, and our cities become unmanageable, when a timely policy could save untold trouble and public expense in the future."

Danger of Sterile Research

"Of the responsibility of research in contribution to action I would speak in somewhat more detail. The discouraging fact seems to be that research is becoming increasingly divorced from deeds. The social sciences seem to have taken over from the natural sciences the old idea that any addition to human knowledge is of itself a boon, regardless of its seeming pertinence or relevancy. A new fact is expected to come in handy, like the missing piece of a jigsaw puzzle, when it is most needed. The trouble is, of course, that in the world as it actually exists, with

its imperious necessities and its huge accumulation of books and surveys, the isolated fact is apt to remain isolated. Having been given no life or destiny by its first begetter, it is all too unlikely ever to be given life by another. It dies within its own solid covers, too remote or detached to influence the rapidly moving stream of events. Research which disavows any responsibility except that of being objective and non-utilitarian may well qualify as 'pure.' But it is a kind of purity which a society—particularly a society in an age of change—can overvalue.

"The divorce of research from a sense of relevance and pertinency has been encouraged by developments within the social science disciplines. Political science becomes behavioral in its approach; economics becomes concerned with model-building. The desire to know and to understand takes the place of the desire to act; under the banner of relativism and cultural norms almost any practice, no matter how barbarous or irrational—from head-hunting to the taking of bribes—can be justified as part of the social process. If the students in our universities are indeed turning from the social sciences to the arts, the explanation

may be that they feel themselves let down and somehow cheated by this denial of moral responsibility among those who teach the once-great disciplines. In the arts they can, at least, achieve a sense of involvement, a feeling that they are men and women with a capacity to create and apply critical standards."

Keep Research in Decision-Making Stream

"When research takes on an existence of its own there are subtle degradations which affect the policy-makers no less than the scholars. Then it seems that no move can be made until a research project has been launched and the last fact ascertained. The foundations and universities find themselves fulfilling in society a role which they would be the last to claim—repositories of an ultimate sanction and a kind of final veto. Not able to act themselves, they seem capable by their choice of research projects to limit and define the action of others. Yet in the life of the world there are things that need to be affirmed, and things that need, above all, to be done.

"In rare but significant cases, it is true, reform measures have followed irresistibly upon the disclosure of facts through a scholarly survey; even then there has usually been (if one looked deep enough) a passion and a conviction at play, however carefully disguised by the scholar's method and apparatus. Facts *can* 'speak for themselves'; in practice they rarely do. It is not research that tells us where as a nation we ought to be tending or by what measures, how timed and executed, we ought to be getting there. At best, research casts some little light upon a pathway which faith and insight have already marked out.

"The Twentieth Century Fund in its small way has been consistently preoccupied with the relation between scholarly research and the spheres of action. The founder of the Fund, E. A. Filene, liked to insist that facts should not 'gather dust' upon a shelf of books; a wide and active dissemination has long been part of the Fund's program. In addition, the Fund in earlier years made it a practice to combine a basic survey of some field with a committee of responsible laymen charged with drawing from the facts practical conclusions or recommendations of policy. The technique has its limitations: committees consume too much of the time of our best men, and representatives of special interests or views can either resist agreement or water down recommendations to a point where they lack substance. Yet in one way or another it has seemed important to keep research in the stream of realistic decision-making.

"Useful techniques and methods for this purpose no doubt wait to be invented; but in the end the answer surely must lie in the tradition that binds

scholars and statesmen alike. 'Rightly to be great,' we can all repeat with Shakespeare, 'is not to stir without great argument.' Facts are linked with action; policy and research are not part of two different worlds. The idea of 'great argument' as the forerunner and accompaniment of action at the highest level is characteristic, we would like to think, of our society. The challenge is to make sure that such a goal is not lost amid the fragmentation of knowledge, the specialization of disciplines, and the heretical (and actually unscientific) assumption that facts by themselves tell the whole story."

Objectivity, Belief, and Intent to Influence

"The leader and policy-maker should not find the concept of 'great argument' hard to define, however hard it may be to fulfill in the heat of battle. Facts marshaled and lucidly presented, sustaining and illuminating convictions born in the responsible exercise of power: this is the course of statesmanship. But what of the scholar or researcher? He cannot use facts to support a predetermined thesis. No doubt; and yet the greatest works of scholarship have had at the heart of them a kind of belief; their objectivity has been achieved through stress and effort, not born of the original sin of indifference.

"There is another sense in which research contributes to the great argument of democracy. Even the survey most restricted to a recital of bare facts can by its timing, by its roots in actual events, link itself to the big choices to be made. A piece of research may fail; it may be late in coming or wide of the mark in its results—but let it not be said, at least, that it was begun without wanting to influence what men do! Research must aim to create the framework of action, to set limits to the debate among practical men. Meanwhile the honest scholar can always keep the hope that the reflection of reality which he creates will be by itself so compelling as to make the subsequent action self-evident.

"Looking over the work of the Fund . . . , I would not want to claim that all the projects under way or completed meet the test of action set forth above. It is enough for the moment if they were all conceived with an intent to meet it. The world carries in this mid-century the burden of vast tasks to be accomplished. It would be a betrayal of destiny if the foundations—or any one of them—were to use themselves in obscure exercises divorced from actual needs. Great institutions have been disbanded or dissolved because they failed to answer the cry of the social order for meaningful results. It would be a tragedy if the modern foundation, under the false yoke of methodology or scientific objectivity, were to find itself, too, cut off from the public it must serve."

SOUTHEASTERN CORNER



BUSINESS DEVELOPMENT CORPORATIONS

There is considerable interest in the South today in "business development corporations" as a device to hasten industrial development. The success of North Carolina to date with its Business Development Corporation (often referred to as the "BDC") is a leading factor stimulating a wide curiosity in this kind of development activity. By now BDC has been in operation four and a half years.

The objective of the North Carolina BDC is to develop new and expand existing business and industry. It is a corporation to provide long-term credit. The BDC cooperates and acts in conjunction with other organizations, public or private, in the promotion and advancement of business and industrial developments in its state. It is a business organization, and all financial assistance rendered is on a basis that full repayment, with interest, is expected.

The BDC is so designed that it shall not compete with other financial institutions such as banks, insurance companies, and building and loan associations; in effect, it picks up where they leave off. Under the Enabling Act, the Corporation has very broad authority for performance of its objectives, and much is left to the determination of policies by its Board of Directors.

The law provides that the Corporation shall not approve any application for a loan unless and until the person applying shall show he has applied for credit through ordinary banking channels and it has

been refused by at least one bank or other financial institution. If the bank or other financial institution is unwilling to make the entire loan, inquiry is made as to whether it would be interested in participating in the loan if it should receive favorable consideration by the Corporation.

At the end of 1959 the management of BDC felt that the Corporation was admirably serving its objectives. In his annual report for 1959 the President of BDC said:

Since start of operations in April of 1956 through December 31, 1959, the Corporation had approved 97 loans totaling \$10,898,465 including \$1,168,560 participations by others in 23 individual loans. Total applications received during this period number 213 Of the Corporation's direct loans approved and its share in participations totaling \$9,729,905, the proceeds were substantially for the following purposes: \$6,941,570 or 72% to assist in financing the construction of new or the expansion of existing plants; \$1,543,845 or 15% for the acquisition of machinery and equipment; \$980,630 or 10% for working capital; and \$263,860 or 3% for payment of existing indebtedness. Of great importance, the loans were to assist in maintaining the employment of at least 5,085 people and to create employment of an additional 8,157 people, or a total of 13,242 jobs, more than one and one-third jobs for each \$1,000 of loan commitment, and this ratio has been substantially maintained with respect to loans actually disbursed by the Corporation. These are, or are expected to be, direct employees of the borrowers, and in addition, a very much larger number of

people are employed by others in supplying materials to the borrowers and in the construction of buildings, the manufacture of machinery and equipment and other services, directly or indirectly, as a result of the loans made by your Corporation. It is understood that generally there are at least five indirect jobs based upon each full-time employee.

At December 31, 1959, all installments on loans were reported to be current. Loans that have been disbursed and loan commitments on which disbursements are expected to be made within the next few months assist the following types of businesses and industries:

	Number of Loans	Amount BDC Loan	Per Cent
Clothing Manufacturers	14	\$1,326,000	20.3
Hosiery and Other Textiles	5	835,000	12.8
Metals and Metal Products	6	743,000	11.4
Tile and Plastic Products	3	500,000	7.7
Paper and Wood Products	5	469,500	7.2
Industrial and Medicinal Gases	1	300,000	4.6
Poultry Processing	6	614,940	9.4
Processing of Other Farm Products	6	745,565	11.5
Grain Facilities	5	410,000	6.3
Meat and Seafood Products	8	227,500	3.5
Miscellaneous	6	345,500	5.3
	65	\$6,517,005	100.0
Participations by Others in 18 of the above loans		836,060	
		\$7,353,065	

Willys R. Knight

October 1960

ATLANTA AREA ECONOMIC INDICATORS

	October 1960	September 1960	% Change	October 1959	% Change	% Change 10 months 60 over 10 months 59
EMPLOYMENT						
Job Insurance (Unemployment)						
Payments	\$431,018	\$621,728	-30.7	\$270,363	+59.4	+6.2
Job Insurance Claimants	6,764	8,282	-18.3	4,998	+35.3	+9.2*
Total Non-Ag. Employment	363,250	363,350r	0.0	365,650	-0.7	+2.3*
Manufacturing Employment	83,250	83,600	-0.4	88,800	-6.3	-1.3*
Average Weekly Earnings,						
Factory Workers	\$84.84	\$83.98r	+1.0	\$82.61	+2.7	+0.5*
Average Weekly Hours,						
Factory Workers	40.4	39.8r	+1.5	40.1	+0.8	-2.3*
Index of Help Wanted Ads (Seasonally adjusted, 1947-49 Avg.=100)	130.2	124.0	+5.0	171.6	-24.1	-15.2
CONSTRUCTION						
Number of Building Permits§	612	735	-16.7	589	+3.9	-10.9
Value of Building Permits\$	\$6,664,310	\$6,941,485	-4.0	\$4,280,356	+55.7	-26.4
Employees	21,800	21,550r	+1.2	22,300	-2.2	-11.7*
FINANCIAL†						
Bank Debits (Millions)	\$2,149.7	\$2,204.8	-2.5	\$2,080.1	+3.4	+6.7
Bank Deposits (Millions)	\$1,364.9	\$1,366.9	0.0	\$1,263.4	+8.03	+3.1*
OTHER						
Department Store Sales Index	173	172	+0.6	176r	-1.7	-0.1§
Retail Food Price Index	118.7	118.2	+0.4	115.3	+3.0	+0.6**
Number of Telephones in Service	380,207	378,912	+0.3	354,775	+7.2	+10.3**

r—Revised

§City of Atlanta only

*Average month

N. A.—Not Available

**End of period

†—Based on retail dollar amounts
‡Data from members of the Federal Reserve System only

Sources: All data on employment, unemployment, hours, and earnings: Employment Security Agency, Georgia Department of Labor; Number Help Wanted Ads: Atlanta Newspapers, Inc.; Building permits data: Office of the Building Inspector, Atlanta, Georgia; Financial data: Board of Governors, Federal Reserve System; Retail Food Price Index: U. S. Department of Labor; Department Store Sales Index: Federal Reserve Bank of Atlanta and Board of Governors, Federal Reserve System; Telephones in Service: Southern Bell Telephone and Telegraph Company.

ATLANTA BUSINESS ACTIVITY

Job insurance payments in the Atlanta Metropolitan Area took a dip in October, reflecting the end of model changeovers in the auto plants as well as some improvement in the textile and primary metals employment picture. The actual number of *job insurance claimants* also dropped off heavily from September. This is only relative improvement, however, as payments and claimants are averaging 6 and 9 per cents respectively above last year.

Despite these seeming improvements, the employment situation, paradoxically enough, is no better than it was a month ago. *Manufacturing employment* lost another 350 from September to October, making the total of factory jobs in October number 5,550 less than in that month a year ago. These reductions came in furniture and fixtures, particularly household furniture, and in stone, clay and glass products, apparel, and paper and allied products.

The apparent discrepancy between job insurance claims and the employment situation is explained, according to the Georgia State Employment Service, by the fact that many seasonal workers, particularly in retail trade, withdrew from the labor force. In addition, a large number of the aircraft workers laid off in October returned to their home counties outside the Metropolitan Area to file their job insurance claims.

Manufacturing was not the only segment having employment losses. *Retail trade* finished October with

300 less jobs than the month before, and *wholesale trade* dropped 150.

Over-all, as of October there were 14,300 people unemployed in the Atlanta Area, 3,400 more than this time last year.

Construction in Atlanta, though showing improvement over October of last year, is nevertheless averaging less than 1959. Figures released by the City of Atlanta Inspector of Buildings show 612 *building permits* valued at \$6,664,310 issued in October. This makes the year's total number of permits 11 per cent under this time in 1959. More striking is the decline in the *value of permits* which is running 26 per cent below a year ago.

Employment in construction increased 250 workers during October, due probably to the increase in permits issued in September. Compared to last year, though, the number of jobs in construction is down 12 per cent.

Another aspect of the employment problem is seen in the *index of help wanted ads* which is usually regarded as a pretty fair indicator of the demand for labor in the area. Although the index moved up to 130.2 during October (the first time it has turned up in five months), it is still 24 per cent behind this month last year, and for the year is averaging some 15 per cent less than 1959.

The Georgia State Employment Service predicts that employment figures for November and December will show increases as the hiring of temporary retail sales and post office employees gets underway. This net increase will have to occur in spite of two significant labor disputes in the Atlanta Area which commenced in early November. Furthermore, the increase in employment caused by Christmas workers is not expected to alter materially the recessionary movement of our economy.

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... George J. Malanos

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Dr. Malanos is Professor of Economics and Chairman of the Department of Economics, Finance and Statistics, School of Business Administration of Georgia State College of Business Administration.

RESEARCH PAPER NUMBER 18

The Use of Psychological Tests in Selecting Salesmen in the South

... Carrol W. Ehlers

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For a company that has a product or service to sell, good salesmen are essential. In recent years the use of psychological tests in selecting salesmen has become more widespread. Dr. Ehlers' paper is a

survey of the extent of use of psychological tests in salesman-selection by southern firms and the various testing practices followed. The study also sets forth the characteristics of users of tests as compared to those of nonusers.

Dr. Ehlers is Professor of Marketing, School of Business Administration, Georgia State College of Business Administration.

BULLETIN NUMBER 9

STUDIES IN BUSINESS AND ECONOMICS

An Econometric Model of the American Minor Cycle

... George J. Malanos
Henry Thomassen

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The purpose of this study, as stated by the authors, is "To construct a system of equations which will predict as much as one year in advance, and with a precision that is acceptable for policy-making, the quarterly magnitudes of American aggregate employment and gross national product." In their conclusions the authors signified that, for the 1947-57 period and in the absence of a Juglar cycle, it was their "concerted opinion that the chief cyclical variation has originated with spending upon consumers' durables."

The authors are on the faculty of the School of Business Administration of Georgia State College of Business Administration. Dr. Malanos is Professor of Economics and Chairman of the Department of Economics, Finance and Statistics. Dr. Thomassen is Associate Professor of Economics.

For copies of the studies named above, send requests to the Bureau of Business and Economic Research, School of Business Administration of Georgia State College of Business Administration, 33 Gilmer Street, S.E., Atlanta 3, Georgia.

